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ABSTRACT

Organizational learning is fundamentally a communication phenomenon and, as such, communication research is particularly well suited to contribute to the understanding of this occurrence. Three communicative processes are constitutive of learning organizations: (1) collective thinking processes, whose three components are collectivity, idea evaluation, and idea extension, allow people with differentiated areas of expertise to combine their knowledge and produce outcomes they could not produce on their own; (2) reflection on past action promotes the creation of new action based on that insight; further action and observation of the consequences generates new insight; and (3) dialogue encourages people to gradually suspend their defensive exchanges and probe for the underlying reasons for their differences. Dialogue becomes the central feature of this tripartite formulation because collective thinking is impossible without it, and reflection is of little value unless its outcomes are meaningfully deliberated. There are four constituent aspects central to the dialogue process: metacommunication, commitments, disclosure, and climate. The idea of learning as a collective and collaborative endeavor undertaken by work groups in a way that enables these groups both to expand their capacity to create knowledge and adapt their structure, practices, and technologies to reflect their new insight is especially timely for contemporary organizations. Future research can make use of this communication literature review as a framework. (Contains 4 tables and one figure and 71 references.) (Author/CR)

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Communication and the Learning Organization

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Abstract

This paper contends that organizational learning is fundamentally a communication phenomenon and that, as such, communication research is particularly well suited to contribute to our understanding of this occurrence. Three communicative processes appear constitutive of learning organizations. *Collective Thinking* processes allow people with differentiated areas of expertise to combine their knowledge and produce outcomes they could not produce on their own. *Reflection* on past action promotes the creation of new action based on that insight; further action and observation of the consequences generates new insight. *Dialogue* encourages people to gradually suspend their defensive exchanges and probe for the underlying reasons for their differences. Dialogue becomes the central feature of this tripartite formulation because collective thinking is impossible without it, and reflection is of little value unless its outcomes are meaningfully deliberated. Research on small group and interpersonal communication is reviewed to delineate critical aspects of each of these three processes. At the end of the paper, these ideas are related to the broader task of organizational communication and learning.

Keywords: organizational learning, collective thinking, reflection, dialogue, sense making, self-directed work teams, communication theory.

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Communication and the Learning Organization

In a 1992 article for Business Week, John Byrne indicates that the most productive organizations in the 1990s will be learning organizations. Many other popular business publications agree (Senge, 1990; Nonaka, 1991; Garvin, 1993). This focus raises some important questions for scholars interested in organizational communication. What exactly is a learning organization? How does learning take place in these organizations? What role can communication play in increasing an organization's propensity for learning?

In an effort to address these questions, this paper will proceed in three stages. First, a definition of learning organizations will be advanced. Second, a description of three key learning principles will be offered--collective thinking, reflection, and dialogue. Third, the relationship between organizational learning and several specific areas of communication research will be discussed in an effort to make connections which can contribute to organizational theory and practice.

To date, there appear to be no other communication-specific publications which examine the connection between communication and learning organizations. This article is intended to initiate a discussion about a topic that is especially timely for organizations, and one to which communication research is well prepared to provide insight.

What is a Learning Organization?

While many definitions of learning organizations/organizational learning have been offered over the past several years (see Table 1), in aggregate they have unfortunately done more to confuse the issue than to clarify it. First, some definitions provide little value because of their abstract nature. For example, Senge's (1990) book *The Fifth Discipline* often leaves the reader speculating as to the meaning intended by the author. He variously describes organizational learning in terms of personal mastery, mental models, and shared vision. While such descriptions are metaphorical and inspirational, they do little to help those who would apply his principles to organizational behavior.

Table 1: Representative Definitions of Learning Organizations/ Organizational Learning

Metaphoric	**Argyris & Schön (1978).** "The detection and correction of error...in ways that involve the modification of the organization's underlying norms, policies, and objectives" (p. 2-3). **Fiol & Lyles (1985).** "The process of improving actions through better knowledge and understanding" (p. 803). **Senge (1990).** "An organization that is continually expanding its capacity to create its future (p. 14).
Rational	**Levitt & March (1988).** "Organizations are seen as learning by encoding inferences from history into routines that guide behavior" (p. 319). **Huber (1991).** "An entity learns if, through its processing of information, the range of its potential behaviors is changed" (p. 89).

Intuitive	**Nonaka (1991).** "Tapping the tacit and often highly subjective insights, intuitions and hunches of individual employees and making those insights available for testing and use by the company as a whole" (p. 97).
Collective	**Weick (1991).** "Individual learning occurs when people give a different response to the same stimulus, but organizational learning occurs when groups of people give the same response to different stimuli" (p. 121). **Stalk, Evans, & Shulman (1992).** "The ability to assimilate new ideas, transfer those ideas to action, ...and move the lessons learned from experience and experiments across boundaries" (pp. 52, 55). **Garvin (1993).** "An organization skilled at creating, acquiring, and transferring knowledge, and at modifying its behavior to reflect new knowledge and insights (p. 80).

Second, some formulations of organizational learning are essentially a repackaging of the rational model of decision making. For example, organizations are said to have learned when their actions result in outcomes which are consistent with organizational goals (Meyer, 1982; Miller & Friesen, 1980; Simon, 1991). Countering this position, Fiol and Lyles (1985) classify these adjustments as *adaptation* rather than learning. They say "Adaptation is the ability to make incremental adjustments as a result of environmental changes, goal structure changes, or other changes" (p. 811). While adaptation may be important for sustaining organizational performance, it alone does not constitute learning which moves beyond merely sustaining performance to facilitate its continual improvement.

Third, some conceptualizations which focus on learning from experience present such a simple picture of learning that almost any organization could be classified as a learning organization. The basic premise is that organizations, in particular manufacturing firms, learn to refine their products and processes through their production experiences (Levinthal & March, 1993; Levitt & March, 1988). Furthermore, the lessons learned from this experience are deposited in organizational memory structures--rules, routines, and the modification of these rules and routines (Huber, 1991; Levinthal & March, 1993; Levitt & March, 1988). While this may be one feature of organizational learning, in and of itself, it does not distinguish between learning organizations and organizations that are failing in the marketplace.

Fourth, while organizational learning can not take place in the absence of individual learning, individual learning is not the same as organizational learning, as definitions by Garvin (1993), Stalk, Evans, and Schulman (1992), and Weick (1991) suggest. A collective element must be fundamental to a satisfying definition of organizational learning.

As a result of this evaluation, I am convinced that it is possible to go beyond the metaphorical to define learning organizations. Furthermore, this definition is more than rational decision making, the learning curve, and recording lessons in rules and routines. Each of these approaches provides a piece of the puzzle, but it is necessary to pull them together in a way that emphasizes both the communicative and collective nature of organizational learning. I am convinced that communication plays a central role such that learning organizations are typified by the nonstop creation of new knowledge which so pervades the organization that it becomes characteristic organizational practice. I am also persuaded of the collective temper of organizational learning. Nonaka (1991) describes it as the ongoing transformation of both the

members and the organization. In other words, as members learn as individuals and from other members, they are changed. These changes, in turn, impact the very nature of the organization. Because of these fundamental convictions, I am drawn toward expanding the definitions offered by Garvin (1993), Stalk, et al. (1992) and Weick (1991). In essence, these scholars present learning organizations as those which are skilled in the capacity to create new knowledge and insight, and then adapt their structure, practices, and technologies to reflect this new insight. This means more than incremental "learning." The focus is on the creation of value added ideas and the ongoing refashioning of the organization (or parts of the organization) in ways that are consistent with what has been gained. Kofman and Senge (1993) characterize this activity as generative and adaptive. Those lessons may be deposited in organizational memory structures, but these structures are constantly re-examined as a part of the learning cycle itself.

How Does Learning Take Place in Learning Organizations?

After examining both popular business literature and academic writing from several disciplines concerning learning and learning organizations, I contend that organizational learning is accomplished through three communicative processes. These processes focus on the creation of new knowledge and the adaptation of organizational structures based on those insights. They are (a) collective thinking, (b) reflection, and (c) dialogue. While these processes have been discussed by other authors, my formulation is significant in two ways. First, I provide a theoretical contribution by combining these three processes in a way that has been previously unclear. The basic contention is that they function as interdependent elements in an ongoing cycle of learning. In this cycle, dialogue functions as the hub which enables both collective thinking and reflection. Second, I provide a functional contribution by concentrating on the communication practices by which these three activities can be accomplished.

While these processes can occur in various contexts, they are most clearly visible in ongoing groups or teams. As such, I consider teamwork to be integral to the learning process. Many organizations have made the move to teams in an effort to increase performance. Different effects of such restructuring on organizational learning have been observed. At this point, it is sufficient to note that constructing an image of the organization as a learning organization, and using teams to facilitate and reinforce this image, could be very effective in motivating workers to engage in learning activities--collective thinking, dialogue, and reflection. Moreover, teams appear to be ideally suited for the execution of these learning activities. Katzenbach and Smith (1993) distinguish "teams" from "groups" and "pseudo teams," in part, by emphasizing mutual responsibility rather than individual responsibility. All members are accountable for the outcome of the task. In other words, teams are collective in nature. Furthermore, they exist in a shared context where constant dialogue is possible. The cross-functional nature of teams and the internal employee transfers which take place via teams makes dialogue a necessary feature of their communicative behavior, and reflection both informs the members' current project and provides for the distribution of lessons and knowledge throughout the organization. With these ideas in mind, we now turn to the three communication processes which constitute organizational learning.

Collective thinking refers to the process by which individuals with differentiated areas of expertise combine their knowledge so as to produce outcomes that they could not have otherwise produced. Individuals come to the team possessing different attitudes, preferences, knowledge, and expertise. Typically the task requires that the group take advantage of this available information in a way which adds value for the organization (McGill & Slocum, 1993; Nonaka, 1991). In the learning process, it is likely that individuals with certain areas of expertise will become responsible for the information collected with regard to those specific areas (Wegner, 1987). This information or knowledge must then be modified and expanded through the contribution of all group members. As individuals challenge the thinking of others while at the same time evaluate their own thinking, they can create knowledge that could not have been created by any one individual (Perkins, 1992).

Nonaka (1991) adds that in addition to explicit, easily shared knowledge, much of an individual's knowledge is tacit, including highly subjective skills and insight. Perhaps the most important process for collective thinking is the conversion of tacit knowledge into explicit knowledge that can be shared with other team members. Nonaka's example of this process is that of a company comptroller who uses the tacit knowledge he has developed throughout years of financial experience to create an innovative budgetary plan rather than a conventional system. Through interaction, other employees come to understand the principles of this innovative system and apply them to their own organizational projects. The comptroller, too, becomes more explicitly aware of the knowledge being codified in the new system.

Drucker's (1992) discussion of knowledge workers adds additional insight to collective conversation. He explains that the means of production in modern organizations often resides in the heads of employees who have become mobile specialists loyal first to their discipline and second to their institution of employment. Learning organizations are those which take advantage of the expertise of knowledge workers by providing an environment in which they find the application of their knowledge to be both creative and satisfying. In other words, novel outcomes and fulfilling organizational experiences are rewarding in and of themselves, and the organizational task is to integrate these outcomes and put them to use.

By emphasizing the collective nature of this communicative process, attention is drawn to the way in which team members integrate differentiated knowledge to produce new knowledge (Putnam, 1988). Through collective thinking new capacities are discovered and information is extended both in breadth and depth--in breadth by linking ideas to generate new and richer understandings about the task and task context and in depth by subjecting those understandings to higher order criticism. The outcomes produced are co-created outcomes owned by the collective because they arrived at them together. The essence of collectivity is the realization that, together, members can work to create knowledge rather than merely collecting it from various sources.

However, collective thinking can not be taken for granted. In their 1993 article, Kofman and Senge lament the problem of fragmentation which is characteristic of the way in which many organizations approach the development of new products or ideas. Typically firms attempt to manage the back and forth of input and revision as separate groups make necessary, discipline specific contributions.

Specifying collective thinking as a key aspect of organizational learning allows the organization to overcome fragmentation by bringing specialists together in a collaborative effort where all members are mutually responsible for outcomes. When these teams are cross-functional, the lessons learned from their experience and experiments can be taken back to various parts of the organization providing an opportunity for the diffusion of ideas with greater impact because the carrier is an insider (Levinthal & March, 1993; Ulrich, Glinow, & Jick 1993).

While collective thinking is necessary for organizational learning, it is not sufficient. Certainly members bring individual knowledge and understanding to the team where it can be integrated with the contributions of others, but this requires the generation of understanding prior to its modification and expansion. The key process which helps individuals produce the knowledge which is integrated during collective thinking is reflection.

Reflection is the process of thinking about past action and experience to inform present practice and thinking about present action and experience to inform future practice. This process is reminiscent of Dewey's (1910) description of reflective thinking during which individuals discover new information, invent new action based on that insight, take action, and then gain further insight by observing the consequences of that action.

As such, reflection involves both an external component in which organizational members consider their interactions with organizational constituents (customers, suppliers, trainers, and competitors) and an internal component in which organizational members examine their interactions with one another. The external component becomes evident when organizational members who ask questions such as "How do customers view our products?", "What insights do newcomers bring that might add value?", and "How can we learn from our experience with our competitors?" These inquiries lead to a second set of reflective questions including "What have I learned from my team members that will inform my contribution to this project?", "What have I learned about my own interactions with others that affects our team performance? ", and "What have I learned from this project which will help me in the next project?"

Schön's (1983) discussion of an American consumer products firm exemplifies internal reflection. This firm has gained a reputation for the development of new products, and a general manager attributes their success, in part, to reflection-in-action. Cross functional teams' reflection enable them to surface and manage the legitimate differences and conflicts which arise. Similarly, I know of an environmental engineering firm whose routine practice is for project team members to reflect on the successes, problems, and failures of past projects to inform the activities comprising the current project. Because some members of project teams are stable while others change, the implications of experience can be transferred to those who have not directly experienced it (Levitt & March, 1988; Garvin, 1993).

Schön (1983) also provides an example of external reflection when he speaks of the 3M company's development of Scotch Tape. While 3M had intended that the tape be used for repairs to book binding, they soon discovered that customers used it for wrapping gifts, attaching pictures to walls, and even curling hair. Accordingly, 3M altered its tape design and advertising to address the uses to which some of their

customers had adapted the tape. McGill and Slocum (1993) report the way in which Home Depot adapts its practices in response to both suppliers and customers. Contractors requested special processing areas in the lumber yard, and when Home Depot complied they discovered that the speed of traffic through their store front registers increased dramatically. The company also added a bridal registry to the services they provide in response to the requests of newlywed customers who were building new homes.

Swieringa and Wierdsma (1992) explain that external reflection is significant for organizational learning because it provides feedback which guides organizational practice. It consists of reading signals emitted from the environment and forming conclusions in response. Specifically, external reflection might bring new information from other organizations in two ways. First, new personnel are likely to bring ideas with them which have proven useful in other firms for which they have worked. Second, by examining the products which are developed and the processes which are used by other organizations, members can adapt or recast their current activities in ways which may improve performance (Dutton & Starbuck, 1978).

Two additional concepts central to reflection are risk and freedom to fail. Handy (1992) says that "space to experiment and room to fail...are necessary corollaries" (p. 25). Some of the best lessons learned have come from mistakes, and organizations must allow members to take reasonable risks knowing that many experimental ventures will fail while simultaneously feeling assured that members are learning from these failures in ways that will help the company in the long run. In fact, Ulrich, et al. (1993) label failures which contribute to learning as "intelligent failures." Such failures result from carefully planned actions which then produce unexpected outcomes. This approach stands in contrast to a blind and erratic experimentation which operates with little semblance of a guiding framework.

However, productive reflection can not be assumed. Kofman and Senge (1993) also identify the problem of reactiveness. Reactive organizations constantly change in response to both internal problems and demands of the environment. While these kinds of responses are necessary, an organization which has reactivity as its primary response will find it difficult to learn because members are determined to make problems go away rather than bringing new knowledge into being. Identifying reflection as a second key component of organizational learning helps combat the problem of reactiveness because the insights gained from reflection are brought to bear on present and future projects. Fundamentally, learning is less about problem solving and more about experimenting and creating higher order methods and technologies.

While reflection is a necessary second component of organizational learning, it too is not sufficient. Both reflection and collective thinking are powerful technologies for creating new knowledge and for adapting organizational behavior in ways which are consonant with this new knowledge. However, without a means for using these technologies effectively, organizational members are likely to grow frustrated with team work and other innovative attempts to improve performance. Dialogue is a means to improve the likelihood of successful reflection and collective thinking, and in the end, to enhance an organization's proclivity for learning. For this reason, dialogue becomes the central feature of

organizational learning because collective thinking is impossible without it, and reflection becomes of little value unless its outcomes are meaningfully deliberated.

Dialogue refers to a form of discussion in which "people gradually learn to suspend their defensive exchanges and...probe into the underlying reasons for why those exchanges exist" (Isaacs, 1993, p. 25). This process implies both the nature of the communication and the atmosphere in which this communication takes place.

Regarding the nature of dialogue, Argyris (1990) speaks forcefully of suspending defensive exchanges when he distinguishes between single-loop-learning and double-loop-learning. Single-loop-learning, which can only be called learning in a limited sense, is characterized by defensive exchanges where individuals fail to test the assumptions which under gird their positions, fail to test the attributions they make regarding other individuals, and avoid communication which might create tension during interaction. In contrast, double-loop-learning encompasses the kinds of interaction which are most likely to result in superior outcomes. It begins as members reflect in order to be clear about their thoughts and feelings, the position they are advocating, and any evaluations or attributions they are making. From that foundation individuals strive to make their premises and inferences clear and develop conclusions that are always testable.

Argyris (1982) provides an example of three co-workers who begin to suspend defenses and engage in learning dialogue. Two of the co-workers are tenured executive officers, and the third is a new partner who is having difficulty integrating with the other two members. During a discussion of long range problems of the firm, of which the integration of new partners is one, the new partner is able to express his doubts about ever becoming an equal member of the group because of the dominating and controlling behavior of one of the tenured partners. Through dialogue, which provided specific examples of actions which had led all three members to make assumptions and attributions regarding the others, both the newcomer and controlling partner came to accept joint responsibility for the problem, and the newcomer was able to see instances in which the controlling partner attempted to help him. The new partner had previously not noticed these instances. These are but two ways in which these partners come to see their hidden defensive practices and take responsibility for helping to create them. The key idea is that the honest disclosure of perceptions and attributions coupled with the discussion of interpersonal interactions increase the likelihood of learning. Argyris contends that double-loop-learning may not be comfortable, but it results in both the generation of valid, useful information and solutions to problems in such a way that they remain solved.

Similarly, Isaacs (1993) distinguishes between debate and dialogue. Debate suppresses deeper inquiry because of its necessarily adversarial nature which produces a winner and a loser. Dialogue, as it occurs in the context of collective thinking, fosters deeper inquiry because it transforms the discussion and the nature of the thinking which supports it. Schein (1993) maintains that dialogue is essential because it is the vehicle through which mental models and organizing assumptions of discipline specific subunits can be understood by members of other divisions. This kind of "cultural understanding" helps to build a common ground from which meaningful discussion can take place. The point is that all

organizations have resources which can increase their potential for learning. When members come together in a context in which they become aware of the processes by which they form assumptions and beliefs, they are better prepared to create products and ideas cooperatively (Isaacs, 1993).

Regarding the atmosphere of dialogue, Buber (1947) makes a distinction between monologue and dialogue. Monologue is strategic and ultimately concerned with the pursuit of individual goals. However, dialogue is ultimately concerned with open communication in which participants exhibit trust, honesty, integrity, openness, humility, and a desire to improve. Similarly, Gibb (1961) distinguishes between supportive and defensive climates in organizations. He concludes that supportive climates exhibit more effective and less distorted communication than do defensive climates. In supportive climates, group members adopt a non-judgmental, descriptive, and cooperative approach to problem solving based on the open, honest, and free discussion of information, expectations, and alternatives. The point is that groups who engage in discussion in a supportive, open environment have a greater propensity for moving beyond monologue or debate to dialogue. Members will be more likely to achieve the goal of collective thinking when they experience an atmosphere of trust and safety wherein members display patience and a respect for the contributions of other group members. In such a climate, individuals would be open to the ideas of others and feel free to share their ideas without fear of censure or ridicule. I have done work in an elementary school setting in which cross functional teams are used to assist disabled children in achieving their educational needs. While this situation might seem ideally suited for organizational learning, team members feel little compulsion to overcome individual and organizational defenses because of the judgmental, accusatory, hostile environment which has been created (primarily by the actions of the school principal). Individuals feel that they must constantly keep their defenses up in the interest of self-preservation. They believe that exploring those defenses publicly, as dialogue suggests, would typically result in negative reprisals.

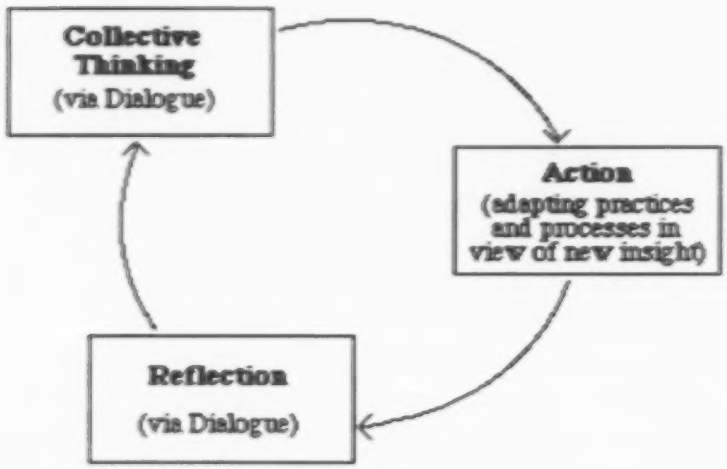
Just as collective thinking and reflection can not be taken for granted, neither can dialogue. Kofman and Senge (1993) draw attention to the problem of competition in which appearance becomes more important than substance. The defensive actions of organizational members will surface as they compete with one another to prove who is correct, more knowledgeable, more competent, or more powerful. Instead of attempting to reduce these tendencies in an effort to produce quality outcomes, members emphasize the presentation of self, which limits learning. Emphasizing dialogue as the third, key component of organizational learning provides a solution to the problem of competition because it is these very competitive predilections, and the reasons behind them, that members are encouraged to reveal and manage.

The Learning Cycle. While it may seem as though the practices of collective thinking, reflection, and dialogue have been presented as discrete activities, it is better to think of them as components of a recursive cycle of learning (see Figure 1). During collective thinking, individuals combine their expertise so as to produce knowledge that they could not have produced on their own. (But characteristic of this kind of interaction is the dialogue in which defensive exchanges and the underlying reasons for those individual differences are exposed. Without such dialogue, the truly collective nature of

learning would elude organizations.) Based on this new knowledge which organizational members have produced, behaviors are enacted that reflect the learning which has taken place. Both during this time of activity, and after the activity has taken place, members reflect on their experience in an effort to gain insight which will inform future action. It is this reflection that helps to infuse the collective thinking process with innovative insight. (Dialogue now becomes important for reflection because it is the way in which the lessons learned through reflection can be applied to future practice.)

Figure 1

The Cycle of Organizational Learning



A discussion of organizational learning would not be complete without one additional insight. It is typically assumed that learning is always positive, but Huber (1991) and March and Levitt (1988) remind us that organizations can learn dysfunctional practices. Much like individuals form bad habits, organizations can learn and then routinize ineffective procedures. To continue to engage in said practices, believing them to be effective, further perpetuates the dysfunction. Because of this, the processes of collective thinking, reflection, and dialogue become all the more salient. By engaging in these three practices, as component parts of organizational learning, organizations can reduce their propensity for dysfunctional adaptation based on prior experience.

What is the Role of Communication in Learning Organizations?

The collective thinking, reflection, and dialogue processes intimate several implications for areas of communication theory and research. In this section, existing theory is drawn upon to inform the concept of organizational learning as presented in this paper. Moreover, in exploring the relationship between organizational learning and communication research, particular attention is given to small group communication literature. These connections are not made in an attempt to reiterate previous findings but

to inform and clarify the components of the organizational learning process and to emphasize the central role which teams play in learning organizations. I am convinced that teams represent the organizational location where the greatest propensity for learning exists. This is because teams have been designed to take advantage of the human resources which are present in any organization. Team members collaboratively apply their unique talents, expertise, abilities, and education to the task at hand, and for this reason, much of the small group communication research provides valuable insight into the three components of organizational learning. This paper is admittedly theoretical in nature. To further develop the scope and impact of learning organizations will require longitudinal research, and it is my intention that this article serve as a framework for such investigation. In doing so, collective thinking, reflection, and dialogue will now be complicated such that particular features of these processes are enumerated and communication research which informs these features is clarified.

Three components of **collective thinking** are central to its functioning--collectivity, idea evaluation, and idea extension. At this stage, dialogue remains vital because it is the means by which collectivity, evaluation, and extension are accomplished.

Table 2: Features of Collective Thinking

Collectivity	**Krayer & Fiechtner (1984)** found that leadership style must match group collectivity/maturity level. **Michaelson, Watson, & Black (1989)** contend that group performance exceeds individual performance. **Myers & Goldberg (1970)** discovered that high ethos group more influential than high ethos individuals. **Stewart & Thomas (1990)** report that dialogic listening builds mutuality and synergy.
Evaluate Ideas	**Alderton & Frey (1983)** say that rewarding minority arguments decreases group polarization. **Gouran & Hirokawa (1983)** maintain that the quality of group decisions is dependent on member vigilance in critical thinking and evaluation. **Hirokawa & Pace (1983)** indicate that effective groups are more rigorous in evaluating ideas and testing consequences. **Lumsden & Lumsden (1993)** explain that quality interactions involve the creative and critical questioning of arguments. **Thameling & Andrews (1991); Nemeth & Kwan (1987)** reveal that groups that listen to minority opinions arrive at better solutions than those that listen to primarily majority opinions.
Extend Ideas	**Fisher (1970a)** found that decisions emerge cumulatively as a group moves toward consensus. **Fisher (1970b)** also found that decisions are formulated during cyclical surges of development. **Lumsden & Lumsden (1993)** maintain that teams arrive at mutual understanding through the negotiation of meaning. **Poole (1983)** notes that a multiple sequence model of decision making is superior to a unitary sequence model because it can account for different group developmental sequences. **Poole, et al. (1985)** discovered that groups modify opinions and ideas in such a way make them common property and create a unity of action. **Putnam (1988)** points out the value of the integration of differentiated knowledge. **Scheidel & Crowell (1964)** state that group development of ideas is a spiraling process.

Collectivity refers to the integration of diverse ideas and perspectives in such a way that performance is improved. In their study of integrated groups (groups that are competent, motivated,

trained, and working as a team) Michaelson, Watson, and Black, (1989) discovered that such groups outperformed their best members 97 percent of the time. While examining the effect of messages of varying ethos upon opinion change, Myers and Goldberg (1970) concluded that messages attributed to a high ethos group (a group of experts which formed a consensus opinion as a result of discussion) were more influential than those attributed to a collection of high ethos individuals (an opinion was aggregated after polling individual experts). Stewart and Thomas (1990) implicate collectivity when they discuss dialogic listening--a process in which the participants concentrate on the co-production of insights, ideas, and solutions. Krayer and Fiechtner (1984) studied "group maturity, a process-oriented variable which focuses on small groups as a collectivity instead of on the individuals within the group" (p. 78). They report that, as groups develop over time, leaders must adjust their style to match group collectivity and maturity levels.

Each of these investigations helps to illuminate the power of collective action. When individuals combine their expertise in a collaborative fashion, their potential for creativity and performance increases.

Evaluating ideas is used here to highlight the critical and creative fashion in which theories and arguments are challenged. Under the umbrella of evaluation, researchers have studied factors which influence decision quality and the role of dissenting opinions. Regarding decision quality, Gouran and Hirokawa (1983) determined that the quality of group decisions is dependent on member "vigilance" in critical thinking and evaluation behaviors as they define problems, clarify objectives, formulate options, and examine possible outcomes. In like fashion, Hirokawa and Pace (1983) explain that effective groups are more rigorous than ineffective groups in the evaluation of ideas and testing of consequences. Finally, Lumsden and Lumsden (1993) state that quality interactions involve "cooperative analysis"--a process of critical, creative questioning which allows team members to "think together...and to test the logic and validity of their arguments" (p. 240).

Regarding the role of dissenting opinions, Thameling and Andrews (1991) report that giving fair consideration to dissenting opinions can result in three benefits: (a) a variety of ideas can be generated; (b) the merits of those ideas can be compared and contrasted; and (c) group members are provided the opportunity to evaluate opinions that might otherwise go untested. Similarly, Alderton and Frey (1983) studied reactions to arguments in small groups and found that positively rewarding minority arguments reduced group polarization. Moreover, Nemeth and Kwan (1987) found that teams which give consideration to divergent viewpoints tend to arrive at better solutions than groups that listen primarily to majority opinions.

These studies are important because they indicate that the type of evaluation which is necessary for learning must include the critical assessment of behaviors and opinions--especially dissenting opinions--and the testing of consequences.

Extending ideas refers to the ways in which ideas and decisions are both developed and applied during group interaction. In this arena, several studies provide significant contributions because they elaborate processes by which ideas can be extended in the context of learning. Scheidel and Crowell (1964) describe the development of ideas in a small group as a "spiraling process" in which one member

will present an idea and other members offer examples of ways in which the idea might be used. Such extension continues until the group accepts or rejects the idea. Lumsden and Lumsden (1993) explain that teams arrive at mutual understanding through the negotiation of meaning during which a team member offers an interpretation of a concept while other members ask questions, clarify meanings, modify the conceptualization of the idea, or proposes a slightly different idea. Interaction of this type continues until the team members arrive at a shared understanding of the issue at hand. Similarly, Poole, Seibold, and McPhee (1985) explain that, during group interaction, "Members restate, summarize, refer back to, refute, argue against, amend, and moderate opinions and ideas ventured by others in previous statements" (p. 92). In doing so, members both transform or modify the original position and generalize it to the entire group making it common property. Putnam (1988) extends the ideas of Lawrence and Lorsch (1969) by applying differentiation and integration to groups in organizations. She explains that differentiation is valuable because common knowledge provides limited insight. Therefore, the differentiated knowledge that members possess offers a variety of perspectives which the group may draw upon. Integration is necessary because it is in the process of integrating these different perspectives and expert pieces of information that new knowledge is created.

In his discussion of decision emergence and modification in small groups, Fisher (1970a) claims that groups do not make decisions, rather decisions emerge cumulatively during group interaction as the group moves through four phases in route to consensus--orientation, conflict, emergence, and reinforcement. Fisher (1970b) also contends that groups do not make decisions gradually via incremental modifications. Instead, decisions are created in cyclical surges during which proposals are made, discussed, dropped, and reintroduced in modified forms. Finally, Poole (1983) says that a "multiple sequence" model of decision development is superior to the generally accepted "unitary sequence" model because it assumes different developmental sequences for different groups wherein contingency variables lead groups to take varying decision paths.

The studies related to the extension of ideas are helpful in that they offer practical advice regarding such elaboration. Decisions and ideas should be both developed and applied through recursive, collaborative interaction during which concepts are shaped and transformed by the contributions of members that posses varying expertise.

Reflection is composed of two basic elements--monitoring and sense making. Dialogue also plays an essential role during this stage because it facilitates the meaningful deliberation of these observations and outcomes.

Table 3: Features of Reflection

Monitoring	**Flower et al. (1989)** indicate that tasks involving interpretation and evaluation involve the monitoring of tasks, goals, and the formulation of ideas. **Harles-Jones (1990)** contends that reflection involves monitoring the ways in which the message and relationship dimensions of interaction are related. **Higgins et al. (1992)** explain how individuals engage in critical reflection as they monitor their ideas and evaluative thinking processes as they work through an intellectual problem. **Poole, et al. (1985)** report that reflexive monitoring involves looking back on past action to inform future behavior.

Sensemaking	**Poole, et al. (1985)** maintain that he structuration of group interaction involves the simultaneous production and reproduction of the task, individual, and social system as the task is accomplished. **Weick (1979)** says retrospective sensemaking is accomplished by retaining lessons learned from previous decisions and applying them to future decision making.

Monitoring involves the scrutinization of one's own thoughts and actions, and/or the position and behavior of one's group. Although there has been less empirical work conducted in the area of reflection than in the other two components of organizational learning identified in this paper, the work which does exist highlights the importance of monitoring for learning organizations. For example, Poole, Seibold, and McPhee (1985) speak of "reflexive monitoring" during which members "intermittently monitor [their] past actions and their setting--goals, plans, reactions, and surroundings, as well as emergent retrospective meanings" to inform their future action (p. 77-78).

Several researchers have examined the role of reflection in written work that is produced by a group. First, Higgins, Flower, and Petraglia (1992) define "critical reflection," in this context, as "metacognition in which [individuals] engage in evaluative thinking about their own ideas and processes as they work through an intellectual problem" (p. 49). Such reflection is shown to contribute to improved outcomes. Second, Flower, Schriver, Carey, Haas, and Hayes (1989) determine that complex writing tasks (involving interpretation and evaluation) require "constructive planning" in which writers frequently monitor their understanding of the task, the goals they have set, and the ways in which they have formulated their ideas in relation to the task and goals. Monitoring is vital to the reflection process because it is on the basis of such monitoring that sense making is conducted.

Sense Making is the reflective process by which individuals or groups come to understand the meaning of events and ideas in light of their own perspective. When considering the way in which we retain lessons learned from previous decisions and then apply those lessons to future decision making, Weick (1979) offers "retrospective sense making" as an alternative to the traditional, economic view of decision making. He explains the way that our sense making activities from previous experiences are brought to bear on current dilemmas. Poole, Seibold and McPhee (1985) also intimate the ongoing process of sense making when they describe structuration as an intersubjective group process which involves the simultaneous production and reproduction of the task, the individual, and the social system as the task is accomplished. Because of this structuration of interaction, members must continually reflect on the ways that the situation has changed so that they may address it appropriately.

Together, monitoring and sense making constitute the reflection process. As a result of monitoring one's individual actions, collective actions, and the actions of others, groups can evaluate their behavior and make decisions in ways which can increase the team's propensity for learning.

While certain, general aspects of **dialogue** were previously mentioned, there appear to be four constituent aspects central to the dialogue process which merit further examination--metacommunication, commitments, disclosure, and climate.

Table 4: Features of Dialogue	
Metacomm.	**Watzlawick, et al. (1967)** found that second-order analysis of communication moves beyond content to assumptions and premises.
Commitments	**Harper & Askling (1980)** discovered that effective groups allow for open discussion of problems and voice objections despite the difficulty in doing so. **Hirokawa & Pace (1983)** contend that effective groups question the validity of assumptions and opinions before accepting them and base those decisions on reasonable and accurate facts. **Maher & Piersol (1970)** report that mission clarity is positively related to job satisfaction. **Poole, et al. (1985)** say that commitments shape structuration by limiting options, reinforcing positions, and drawing attention to power.
Disclosure	**Berger & Calabrese (1975)** highlight factors which assist in the reduction of uncertainty during interaction. **Culbert (1988)** maintains that disclosure of attitudes, beliefs, and feelings is necessary for a meaningful relationship. **Fisher & Ellis (1990)** indicate that interpersonal risk is necessary for effective group process. **Jourard (1960)** revealed that self-disclosure is reciprocal.
Climate	**Gibb (1961); Pavitt & Sackaroff (1990)** explain that supportive behaviors help to create a climate conducive for effective communication. **Lumsden & Lumsden (1993)** note that a dialogic ethic permits members to express opinions and freely participate while being acknowledged as important to the group. **Neale & Brazerman (1991)** state that the positive use of humor enhances helpfulness and reduces hostility. **Prentice (1975)** points out that trust destroying behavior directed at one group member negatively impacts other group members as well.

Metacommunication is a term coined by Watzlawick, Beavin, and Jackson (1967) to refer to the way in which the relational dimension of a message shapes or informs the content of that message. The ideas of Watzlawick, et al. have been extended in recent years such that their term is now commonly defined as "a message about a message" or "communication about communication" (see Tompkins, 1982, for example). In other words, when interactants pause to consider the structure of their communication, they are conducting second-order analysis which moves beyond content to the assumptions and premises which lie behind their communication. This practice is important for dialogue in that the contextual elements which help define communication become open for discussion and clarification.

Commitments is a general term used to refer to the assumptions, positions, attributions, inferences, and premises which individuals bring to interaction. In their study of a large industrial corporation, Maher and Piersol (1970) found that lack of clarity regarding the department mission negatively affected job satisfaction and perceptions of intra and inter-departmental cohesiveness. Speaking again of structuration, Poole, Seibold, and McPhee (1985) note that commitments shape structuration by limiting options, reinforcing positions, and drawing attention to the role of power and influence in decision making" (p. 90). When Hirokawa and Pace (1983) studied the communication-based reasons for effective and ineffective decision making, they found that, in contrast to ineffective groups, effective groups both question the validity of assumptions and opinions before accepting them and base their conclusions on accurate facts, assumptions, and inferences. In a related study, Harper and

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Askling (1980) discovered that effective groups allow for the open discussion of problems and voice objections despite the difficulty of engaging in this type of interaction.

Each of these studies helps to explain the importance of commitments. Because they profoundly influence both thinking and action, analyzing and justifying member commitments openly is essential for the meaningful dialogue which characterizes organizational learning.

Disclosure involves revealing information that is customarily concealed (Devito, 1988). As such, disclosure is not concerned with incidental information, and it implies a level of vulnerability. Several authors have offered suggestions for managing such vulnerability successfully. First, Culbert (1988) indicates that the disclosure of attitudes, beliefs, feelings, and values is one of the characteristics of a rich and meaningful relationship. Second, Jourard (1960) found that self-disclosure is typically reciprocal in nature. In other words, one way to facilitate increased disclosure from other team members is to engage is self-disclosure. Third, in their research concerning uncertainty reduction, Berger and Calabrese (1975) present several axioms which explain the way in which uncertainty can be reduced during interaction. Some of these include the increase of verbal communication, information seeking, nonverbal affiliative expressiveness, and the intimacy level of communication. Increases in such communication is said to not only reduce uncertainty but also to foster liking and reciprocity in disclosure. Finally, Fisher and Ellis (1990) emphasize the importance of interpersonal risk in the group process. They say "Anyone who engages in communication with another person, if that communication is to be effective and meaningful, must inevitably assume some risk of self." This kind of vulnerability to fellow group members is necessary for effective group process.

The research on disclosure simply illustrates the importance of openness, candidness, and transparency among group members if meaningful communication is going to take place. Members must risk being vulnerable if they are to truly learn from their interaction. Because this prospect is typically unsettling, the climate in which the group functions becomes essential for such disclosure.

Climate refers to the atmosphere which characterizes the temper of a group or team. In general terms, several researchers comment on the importance of supportive factors in the creation of a climate which is conducive for dialogue. These factors include openness, honesty, the encouragement of participation, harmony, inclusion, commitment, loyalty, pride, and trust (Gibb, 1961; Kinlaw, 1991; Pavitt & Sackaroff, 1990; Corey & Corey, 1987). Neale and Brazerman (1991) note the importance of a negotiator's good humor in influencing the generosity and helpfulness of others, enhancing liking and reducing hostility and aggressiveness, and developing creative solutions. Similarly, Smith and Powell (1988) found that group leaders who use disparaging humor targeted toward subordinates received lower effectiveness ratings than those using either self-disparaging humor or no humor during group interaction. Prentice (1975) found that the destruction of trust of one group member by another affects the quality of communication of the entire group--not only the targets of trust destroying behavior, but other group members who were unwitting witnesses of the communication. Finally, in response to the silencing of some group members during deliberation, Lumsden and Lumsden (1993) speak of the "dialogic ethic"

which permits every group member to express opinions, freely participate, and be acknowledged as an important individual to the group.

While metacommunication, commitments, and disclosure reveal the kinds of communication behaviors that must be enacted if dialogue is to contribute to organizational learning, studies of group climate explain the atmosphere in which dialogue must take place. A dialogic climate is one in which members feel free to express ideas, evaluate contributions, test assumptions, disclose information, and analyze consequences without fear of damaging repercussions.

This section, which examines the three components of organizational learning in greater detail, is important because the contributions of previous communication research help to inform our understanding or the organizational learning process. Having accomplished this, it also becomes important to return to the broader task of organizational communication. In the final section, implications of organizational learning are extended to several contemporary concerns salient for the study and practice of organizational communication.

Organizational Communication and Learning

The idea of learning as a collective and collaborative endeavor undertaken by work groups in a way that enables these groups both to expand their capacity to create knowledge and adapt their structure, practices, and technologies to reflect their new insight is especially timely for contemporary organizations. Presently, the amount of information and the complexity of alternatives available to organizations are burgeoning. As such, it is important to be able to turn that information into knowledge that has value. This conversion is crucial for organizations where the turbulence of environments and increasing global competition makes organizational survival dependent on the organization's capacity to attend to, interpret, act on, and learn from the consequences of external, environmental changes and internal responses to those changes. The competitive advantage will go to those organizations who can best manage their resources--get their product to the marketplace first and be the leader in innovative modifications. Therefore, a thorough understanding and pervasive use of the principles of organizational learning can both prepare organizations to meet requisite demands and propel them into a creative period of transformation. Noteworthy in this regard are several implications for key, contemporary organizational communication concerns spanning various contexts--the relationship between the organization and the environment, organizational identity, teams, and workplace democracy.

The relationship between the organization and the environment is an enduring issue. In terms of learning, the environment serves not only as a source of demands requiring an organizational response, but also a reservoir of knowledge from which members can draw. Requests from customers, appeals from suppliers, practices of competitors, and requirements of cooperating organizations provide opportunities for learning organizations to acquire information which can challenge their conventional thinking. Future research might examine channels and the flow of information from the environment to organizational members, the influence of public communication from constituent organizations as a

source of new ideas, and the roles played by organizational members in the diffusion of innovative concepts.

Organizational identity has surfaced recently in a series of publications related to organizational change (Albert & Whetten, 1985; Cheney, 1991; Dutton & Dukerich, 1991; Fiol, 1991). While these works have been primarily related to organizational adaptation, the relationship between identity and learning offers numerous possibilities for future investigation. An organization might strategically construct its identity as a learning organization viewing members as continual learners. This constitution of both organizational and individual identity would have significant implications for socialization, work priorities, member relationships, the value of employee contributions, organizational rewards, and the management of change. Research might also examine the influence of the forces of change on identity modification.

Organizations of all kinds are rapidly making the transition to teams in an effort to improve productivity, quality, efficiency, and responsiveness. While the level of autonomy granted to teams varies from organization to organization, teams that are truly self-directed offer tremendous potential for learning. Instead of managing the back and forth of input and revision as separate groups attempt to make discipline specific and necessary contributions, cross functional teams take advantage of the differentiated knowledge which team members bring to the task at hand. It is in this context that the processes of collective thinking, reflection, and dialogue become most complex and most rewarding. Subsequent studies might examine these processes at the team level in greater detail than has been possible in this paper.

Finally, the concern for workplace democracy is growing in both academic and professional arenas. It is possible that organizational learning, with its emphasis on the creative contributions of members, the importance of employee voice and empowerment, dialogue regarding hidden assumptions and undiscussable topics, the negotiation of meanings and procedures, and reflexive activity designed to scrutinize both thoughts and actions, provides a field which is fertile for the growth of democratic practices in the workplace. Future research could examine the ways and extent to which learning organizations facilitate or inhibit workplace democracy and interactive justice.

The phenomenon of organizational learning is an exciting theoretical and practical activity. This paper has conceptualized organizational learning as a communication phenomenon which is rooted in dialogue and made possible by collective thinking and reflection. As such, I have presented communication research which contributes to our understanding of these learning components in an attempt to establish a framework for future research.

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